NTTA Projects	Original Issue Date: 06/05/2008	SD-02
Resource: Schematic Design	Revision 1 Issue Date: 04/28/2011	Page 1 of 3
Title: Schematic Level Traffic Analysis		

1.0 PURPOSE:

The purpose of this document is to define the procedure to collect and analyze traffic data to aid in project schematic design.

All schematic level traffic analyses for NTTA projects shall comply with these procedures herein.

2.0 RESPONSIBILITIES:

2.1 Traffic Consultant – The Traffic Consultant shall be responsible for complying with the requirements within this procedure.

2.2 Corridor Manager (CM)/Project Manager – The CM/Project Manager shall be responsible for coordinating the traffic data collection and traffic projection documentation in accordance with this procedure for utilization in design considerations.

2.3 NTTA Design Manager – The NTTA Design Manager shall be responsible for ensuring implementation of this procedure.

3.0 SCOPE/APPLICABILITY:

This procedure shall apply to all NTTA projects and corridors within the Project Delivery Department.

4.0 REFERENCES:

- Highway Capacity Manual
- The MTP for the Dallas-Fort Worth Area (NCTCOG): http://www.nctcog.org/trans/mtp/
- TxDOT Traffic Data and Analysis Manual
- TxDOT Project Development Process Manual
- TxDOT Transportation Planning Process Manual
- Local City and County Demographic Data

5.0 DEFINITIONS & ACRONYMS:

6.0 PROCEDURES:

Schematic level traffic analysis consists of schematic and environmental documentation level traffic forecasting. Both processes require first collecting traffic data.

6.1 Traffic Data Collection and Analysis: In accordance with the *Traffic Data and Analysis Manual*, the following traffic data shall be collected and/or analyzed:

- Traffic counts along the corridor
- Obtaining and analyzing historical traffic count data

- Obtaining the latest traffic model and origin/destination trip tables from NCTCOG to support travel demand forecasting

6.2 Traffic Study – A sketch level traffic study shall be performed by using the collected traffic data, evaluating corridor growth, calculating traffic, and documenting the analysis.

6.2.1 Corridor Growth Evaluation: This is the initial evaluation of corridor feasibility to determine the growth potential of the project corridor. The land use assumptions developed are critical parameters in estimating the potential traffic for the future years. This evaluation shall be a thorough review of historical and forecasted demographic growth trends in the corridor, utilizing applicable city and county sources, focusing on historical and forecasted population, household size, employment data, and household income growth in the corridor.

6.2.2 Traffic Calculation: Annual traffic estimates shall establish a 40-year traffic projection calculating out from the opening year of the roadway. Traffic assignments shall be run for specific model years using the TransCAD networks from NCTCOG, with corresponding modification for a specific project. Traffic shall be estimated utilizing official NCTCOG trip tables and an alternative adjusted demographics scenario. Traffic estimates shall be generated in accordance with NTTA and TxDOT/TTA traffic forecasting assumptions.

6.2.3 Traffic Analysis Documentation: The sketch level traffic estimates shall be documented in a detailed letter report which contains study findings and recommendations, if any, for use in determining the project's traffic.

6.3 Schematic Design and Environmental Documentation Traffic Forecasting – The traffic projections for specific corridors shall be developed for ADT, AM peak hour traffic, PM peak hour traffic and turning movements by adhering to the following process:

6.3.1 ADT, AM peak hour traffic and PM peak hour traffic projections shall be developed for all elements for the proposed corridor, inclusive of mainlanes, frontage roads, slip ramps, direct connections and turning movements at cross-streets;

6.3.2 D, K, percent trucks (ADT, DHV), peak hour factor, percent light duty (ADT, DHV), percent medium duty (ADT, DHV), and percent heavy duty (ADT, DHV) shall be included as a deliverable.

6.3.3 Line diagrams of the mainlanes, frontage roads, slip ramps, direct-connection ramps, and cross-streets with the design year ADT volumes, AM peak hour volumes and PM peak hour volumes with intersection turning movements shall be included as a deliverable.

7.0 REGULATORY REQUIREMENTS:

N/A

8.0 RELATED BOARD POLICY:

N/A

9.0 COMPONENT DOCUMENTS:

N/A

10.0 FLOWCHART:

N/A

11.0 REVISION HISTORY:

Revision	Revised by:	Date Issued	DRN	Reason for Revision
0	Dave Clarke	06/05/2008		Original Issue
1	Darla Payberah	04/28/2011	10287	Removed “Guiding Principle”. Updated 3.0 Scope/Applicability